Set Meeting

EPA Region 5 Records Ctr.
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To

Subject Plan for investigation at Mallard Lake Landfill

Steve,

As per you your request I have put together a short initial investigation scope for North Mallard Lake Landfill.

1) Sample all existing perimeter groundwater monitoring wells on the Mallard Lake North Landfill site for VOCs, Methane, carbon dioxide, and oxygen. All groundwater samples must be collected in accordance with low-flow groundwater sampling procedures due to the possible presence of volatile organic compounds. Existing well depths and screening intervals should be ascertained. Groundwater elevation from all wells should be obtained and groundwater flow maps should be constructed. Seasonal groundwater flow maps should be created to determine the influence of soil saturation on the gas migration. A geologic cross-sections to understand subsurface conditions should be developed.

2) It is WESTON's understanding that the monitoring probes and the monitoring wells present on the landfill are old and have not been used for monitoring for prolong period of time. Therefore the condition of the probes is not know. Since the conditions of the probes is not known we are suggesting the following investigation:

a) Install nested monitoring probes in the northwest portion of the landfill.

b) Install nested monitoring probes on the north edge of the landfill.

c) Install nested monitoring probes on the southeast portion of the landfill.

The nested probes should be monitored for VOCs, methane, carbon dioxide and oxygen.

It may be beneficial to collect samples at depth of the clay loam in this area for sieve analysis to better determine permeable zones. I have suggested nested well locations on the attached figure.

3) Headspace readings for methane, carbon dioxide and oxygen from any existing or newly installed groundwater wells on the Mallard Lake North Landfill property should be screened and recorded for both initial headspace gas concentrations when opening the well to atmosphere and for any sustained methane concentrations for a minimum of 3-minutes after the well head is open.

5) Investigate the groundwater flow in the vicinity of ML-6 from newly installed and existing wells or vapor probes that intersect the water table.

6) Residence to the north should be screened for Methane and VOCs, if they already are not screened.

7) Monitor shallow gas vents and deep gas vents for methane, carbon dioxide, and oxygen.

If you have any question please call.

Omprakash

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